

CLAIMS

1. A thermoplastic resin structure formed of a resin composition that comprises substantially (a) from 5 to 80 % by volume of a polyolefin resin and (b) from 20 to 95 % by volume of a polyphenylene sulfide resin, which is characterized in that, in morphology therein seen through electronic microscopy, the polyphenylene sulfide resin (b) forms a matrix phase (continuous phase) and the polyolefin resin (a) forms a disperse phase.

2. The thermoplastic resin structure as claimed in claim 1, for which the blend ratio of the polyolefin resin (a) and the polyphenylene sulfide resin (b) is such that the former accounts for from 55 to 80 % by volume and the latter for from 20 to 45 % by volume.

3. The thermoplastic resin structure as claimed in claim 1, for which the blend ratio of the polyolefin resin (a) and the polyphenylene sulfide resin (b) is such that the former accounts for from 60 to 75 % by volume and the latter for from 25 to 40 % by volume.

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4. A thermoplastic resin structure formed of a resin composition that comprises (a) from 15 to 85 % by volume of a polyolefin resin and (b) from 15 to 85 % by volume of a polyphenylene sulfide resin, which is characterized in that, in morphology therein seen through electronic microscopy, both the phase of the polyphenylene sulfide resin (b) and the phase of the polyolefin resin (a) are substantially continuous phases.

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5. A thermoplastic resin structure formed of a resin composition that comprises (a) from 55 to 95 % by volume of a polyolefin resin and (b) from 5 to 45 % by volume of a polyphenylene sulfide resin, which is characterized in that, in morphology therein seen through electronic microscopy, the polyolefin resin (a) forms a continuous phase and the polyphenylene sulfide resin (b) forms a laminar disperse phase.

6. The thermoplastic resin structure as claimed in any of claims 1 to 5, for which the polyolefin resin (a) is at least one selected from polyethylene, polypropylene, ethylene/ α -olefin copolymers, [copolymers of (ethylene and/or propylene) and (unsaturated carboxylic acid and/or unsaturated carboxylate)], and [copolymers of (ethylene and/or propylene) and (unsaturated carboxylic acid and/or unsaturated carboxylate) in which at least a part of the carboxyl groups are modified into metal salts].

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7. The thermoplastic resin structure as claimed in any of claims 1 to 6, which contains (c) from 0.5 to 200 parts by weight, relative to 100 parts by weight of the total of the polyolefin resin (a) and the polyphenylene sulfide resin (b), of an inorganic filler.

8. Containers for transportation or storage of liquid chemicals or gases, which are obtained by working the thermoplastic resin structure of any of claims 1 to 7.

9. Attached parts for containers for transportation or

storage of liquid chemicals or gases, which are obtained by working the thermoplastic resin structure of any of claims 1 to 7.

10. Moldings of the thermoplastic resin structure of any of claims 1 to 7, which are formed in at least one method of injection molding, injection compression molding or compression molding.

11. A multi-layer structure with a barrier layer, in which the barrier layer is formed of the thermoplastic resin structure of any of claims 1 to 7.

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12. The multi-layer structure as claimed in claim 11, wherein a neighboring layer is formed on one or both surfaces of the barrier layer, and the neighboring layer is a thermoplastic resin layer differing from the thermoplastic resin structure that forms the barrier layer.

13. The multi-layer structure as claimed in claim 12, wherein the thermoplastic resin to form the neighboring layer is at least one selected from polyolefin resins, thermoplastic polyester resins, polyamide resins, polycarbonate resins and ABS resins.

14. The multi-layer structure as claimed in claim 12, wherein the thermoplastic resin to form the neighboring layer is at least one selected from polyolefin resins, thermoplastic polyester resins and polyamide resins.

15. The multi-layer structure as claimed in claim 12,

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wherein the thermoplastic resin to form the neighboring layer is an ethylene homopolymer and/or an ethylene/α-olefin copolymer having a melt flow rate of from 0.01 to 30 g/10 min and a density of from 0.90 to 0.97 g/cm³.

16. The multi-layer structure as claimed in claim 12, which has an adhesive layer formed between the barrier layer and the neighboring layer.

17. The multi-layer structure as claimed in claim 16, wherein the adhesive layer is formed of a modified polyolefin having a degree of crystallinity of at most 50 % and containing from 0.01 to 10 % by weight of an unsaturated carboxylic acid or its derivative grafted thereon.

18. The multi-layer structure as claimed in claim 17, wherein the adhesive layer comprises from 60 to 99 parts by weight of a modified polyolefin having a degree of crystallinity of at most 50 % and containing from 0.01 to 10 % by weight of an unsaturated carboxylic acid or its derivative grafted thereon, and from 1 to 40 parts by weight of a tackifier.

19. The multi-layer structure of as claimed in any of claims 11 to 18, which is formed through coextrusion.

20. The multi-layer structure as claimed in any of claims 11 to 19, which is formed into multi-layered tubes or multi-layered blow moldings through coextrusion.

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